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IN THE WINITED STATES PATENT AND TRADEMARK OFFICE

APR 0 8 2002

In re Patent Application of:

BECKER

BECKER

Examiner: Hill, M.

Serial No. 10/020,596

Atty. Docket No. GP123-02.UT

Filed: December 7, 2001

For: METHOD AND KITS FOR ENHANCING THE ASSOCIATION RATES OF POLYNUCLEOTIDES

EXAMPLE 1 0 2002

TECH CENTER 1600/2900

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b) & (c)

Commissioner for Patents Washington, D.C. 20231

Sir:

Applicant brings to the Examiner's attention the references listed on the enclosed form PTO/SB/08 (two copies) for consideration in connection with the examination of the above-identified application. Copies of these references are enclosed herewith.

This Information Disclosure Statement is being submitted under 37 C.F.R. § 1.97(b) before the mailing date of a first Office action on the merits.

If Applicant is mistaken, and a first Office action on the merits was mailed on or before the certified date of mailing indicated below, then Applicant requests that this Information Disclosure Statement be treated as a submission under 37 C.F.R. § 1.97(c) and that the fee due under 37 C.F.R. § 1.17(p) be charged to Deposit Account No. 07-0835 in the name of Gen-Probe Incorporated.

Applicant respectfully requests that the Examiner indicate consideration of the cited references by returning a copy of the enclosed form PTO/SB/08 with the Examiner's initials or other appropriate marks.

Serial No. 10/020,596 Atty. Docket No. GP123-02.UT

Certificate of Mailing

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date indicated below with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

By:

Respectfully Submitted,

Date: April 1, 2002

Charles B. Cappellari Registration No. 40,937

Attorney for Applicant

GEN-PROBE INCORPORATED

Patent Department 10210 Genetic Center Drive San Diego, California 92121

PH: (858) 410-8927 FAX: (858) 410-8928 Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 4

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				U.S. PATENT DOCL	JMENTS	
Examiner Initials*	Cite No. ¹	Mumbar	ocument Kind Code² (<i>if known</i>)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		5132207		Kohne et al.	07-21-1992	
		5512436	Α	Stone	04-30-1996	
		5589335	Α	Kearney et al.	12-31-1996	
		6030954	Α	Wu et al.	02-29-2000	
		6281005	B1	Casal et al.	08-28-2001	
		6287774	B1	Nikiforov	09-11-2001	
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	No.¹	Office ³	Number ⁴	(if known)	Applicant of Oited Document	MM-DĐ-YYYY	Figures Appear	Τ6
<i>i</i>		EP	0610212	B1	Amersham International	08-17-1994		
		EP	0853129	A2	Vysis, Inc.	07-15-1998		
		WO	0106011	A2	Genometrix Genomics, Inc.	01-25-2001		
J		WO	9108480	A1	The Board of Trustees of Leland Stanford Jr. University	06-13-1991		
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Application Number	10/020,596	7		
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	T	OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	T
Examiner nitials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		ASAYAMA et al., "Design of Comb-Type Polyamine Copolymers for a Novel pH-Sensitive DNA Carrier", Bioconjug Chem, 1997 Nov-Dec;8(6):833-8, American Chemical Society, US	
		BLOOMFIELD, "Condensation of DNA by Multivalent Cations: Considerations on Mechanism", Biopolymers, 1991 Nov;31(13):1471-81, John Wiley & Sons Incorporated, US	
		BLOOMFIELD, "DNA condensation", Curr Opin Struct Biol, 1996 Jun;6(3):334-41, Current Biology Ltd., GB	
		FERDOUS et al., "Comb-Type Copolymer: Stabilization of Triplex DNA and Possible Application in Antigene Strategy", J Pharm Sci, 1998 Nov;87(11):1400-5, American Pharmaceutical Association, US	
		FERDOUS et al., "Inhibition of Sequence-Specific Protein-DNA Interaction and Restriction Endonuclease Cleavage via Triplex Stabilization by Poly(L-lysine)-graft-dextran Copolymer", Biomacromolecules, 2000 Summer;1(2):186-93, American Chemical Society, US	
		FERDOUS et al., "Mechanism of Intermolecular Purine-Purine-Pyrimidine Triple Helix Stabilization by Comb-Type Polylysine Graft Copolymer at Physiologic Potassium Concentration", Bioconjug Chem, 2000 Jul-Aug;11(4):520-6, American Chemical Society, US	
	·	FERDOUS et al., "Poly(L-lysine-graft-dextran copolymer: amazing effects on triplex stabilization under physiological pH and ionic conditions (in vitro)", Nucleic Acids Res, 1998 Sep 1;26(17):3949-54, Oxford University Press, GB	
		FERDOUS et al., "Poly(L-lysine)-graft-dextran copolymer is a novel stabilizer of triplex DNA(II): potassium-insensitive triplex formation", Nucleic Acids Symp Ser, 1997;37:301-2, Oxford University Press, GB	
		FERDOUS et al., "Relative Effects of Graft Copolymer and Polyamines on Triplex Stabilization Under Physiological Conditions", Nucleosides Nucleotides, 1999 Jun-Jul;18(6-7):1651-3, Marcel Dekker Incorporated, US	
		KIM et al., "Acceleration of DNA strand exchange by polycation comb-type copolymer", Nucleic Acids Symp Ser, 1999;42:139-40, Oxford University Press, GB	
		KIM et al., "Comb-Type Cationic Copolymer Expedites DNA Strand Exchange while Stabilizing DNA Duplex", Chem Eur J, 2001 Jan 5;7(1):176-80, Wiley-VCH Verlag GmbH, DE	-
		LUO et al., "Synthetic DNA delivery systems", Nat Biotechnol, 2000 Jan;18(1):33-7, Nature America Incorporated, US	
		MAJLESSI et al., "Advantages of 2'-O-methyl oligoribonucleotide probes for detecting RNA targets", Nucleic Acids Res, 1998 May 1;26(9):2224-9, Oxford University Press, GB	

	Examiner	Date	
0	Signature	Considered	

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Complete if Known MADEMARY Substitute for form 1449B/PTO **Application Number** 10/020,596 INFORMATION DISCLOSURE December 7, 2001 **Filing Date** First Named Inventor **BECKER** STATEMENT BY APPLICANT 1648 Group Art Unit Hill, M. **Examiner Name** (use as many sheets as necessary) **GP123-02.UT** Attorney Docket Number of 4 3 Sheet

		OTUED DRIOD ART. NON DATENT LITERATURE DOCUMENTS	
	·	OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	1/3
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		MARUYAMA et al., "Characterization of Interpolyelectrolyte Complexes between Double-Stranded DNA and Polylysine Comb-Type Copolymers Having Hydrophilic Side Chains", Bioconjug Chem, 1998 Mar-Apr;9(2):292-9, American Chemical Society, US	
		MARUYAMA et al., "Comb-Type Copolymers for Controlled DNA Delivery", Nucleosides Nucleotides, 1999 Jun-Jul;18(6-7):1681-2, Marcel Dekker Incorporated, US	
		MARUYAMA et al., "Comb-Type Polycations Effectively Stabilize DNA Triplex", Bioconjug Chem, 1997 Jan-Feb;8(1):3-6, American Chemical Society, US	
		MARUYAMA et al., "Nanoparticle DNA Carrier with Poly(L-lysine) Grafted Polysaccharide Copolymer and Poly(D,L-lactic acid)", Bioconjug Chem, 1997 Sep-Oct;8(5):735-42, American Chemical Society, US	
		MARUYAMA et al., "Poly(L-lysine)-graft-dextran copolymer is a novel stabilizer of triplex DNA (I): stabilization of poly(dA).2poly(dT) triplex", Nucleic Acids Symp Ser, 1997;37:225-6, Oxford University Press, GB	
		MARUYAMA et al., "Preparation and evaluation of ODN conjugates with polycation comb-type copolymer", Nucleic Acids Symp Ser, 1999;42:97-8, Oxford University Press, GB	
		PORSCHKE, "Nature of Protamine-DNA Complexes A Special Type of Ligand Binding Co-operativity", J Mol Biol, 1991 Nov 20;222(2):423-33, Academic Press Limited, GB	
		RENZ et al., "A colorimetric method for DNA hybridization", Nucleic Acids Res, 1984 Apr 25; 12(8):3435-44, Oxford University Press, GB	
		SIKORAV, "Complementary Recognition in Condensed DNA: Accelerated DNA Renaturation", J Mol Biol, 1991 Dec 20;222(4):1085-108, Academic Press Limited, GB	
		TORIGOE et al., "Poly(L-lysine)-graft-dextran Copolymer Promotes Pyrimidine Motif Triplex DNA Formation at Physiological pH", J Biol Chem, 1999 Mar 5;274(10):6161-7, American Society for Biochemistry and Molecular Biology, US	
		TORIGOE et al., "Promotion mechanism of triplex DNA formation by comb-type polycations: Thermodynamic analyses of sequence specificity and ionic strength dependence", Nucleic Acids Symp Ser, 1999;42:137-8, Oxford University Press, GB	
		TRUBETSKOY et al., "Layer-by-layer deposition of oppositely charged polyelectrolytes on the surface of condensed DNA particles", Nucleic Acids Res, 1999 Aug 1;27(15):3090-5, Oxford University Press, GB	
		WAHL et al., "Efficient transfer of large DNA fragments from agarose gels to diazobenzyloxymethyl-paper and rapid hybridization by using dextran sulfate", Proc Natl Acad Sci USA, 1979 Aug;76(8):3683-7, National Academy Press, US	

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		OTHER PRIOR ART NON PATENT LITERAT	URE DOCUM	IENTS	(92
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